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MONDAY, JANUARY 12TH, 1852.

JOHN ANSTER, LL.D., V.P., in the Chair.

JOSEPH DICKENSON, M.D., Joseph Beete Jukes, Esq., Thomas T. Kelly, Esq., and George Roe, Esq., were elected Members of the Academy.

Rev. Humphrey Lloyd, V.P., on the part of Maurice O'Connell, Esq., presented a collection of Meteorological Observations made at Darrynane Abbey in the years 1845 and 1846. He also explained that the views he had put forward respecting the influence of the Gulf Stream upon the climate of Ireland, had been entertained by the late Daniel O'Connell, Esq., who had noticed the more frequent arrival, during late years, of West Indian seeds, &c., upon the south-western coast of Ireland.

The Secretary of Council presented the following donations to the Museum :

A small frying-pan, found in the ford of the river Suck, near Corneen Castle, Ballinasloe, together with a quantity of the horns and other bones of deer. Presented by William T. Potts, Esq.

Four limpets, found with many others, in an ancient structure called the Giant's Grave, on the edge of Lough Aun, County Mayo, 700 feet above the level of the sea. Presented by Richard Glennan, Esq.

The Secretary of Council read the following letter from Dr. Griffin, of Limerick :

Limerick, November 26, 1851.

MY DEAR SIR,—Lord Dunraven requested me, some time since, to send you in a brief form the principal facts connected with the Limerick whirlwind of October 5th, 1851, that you

might bring them under the notice of the Academy if they should seem of sufficient scientific interest. They may be divided into, first, those which indicate its general direction and limits; second, those which show its force and power; and, third, some singular circumstances that point out a mode of action, at particular points, extremely peculiar and unusual.

I went over the principal points visited by it the morning after its occurrence, and on one or two occasions afterwards. Many of the stories that had appeared in the newspapers were unfounded, such as a man being taken up and carried across the river by it, and other such fables. Some of its effects, however, were, as I have said, very extraordinary.

The 5th of October was an overcast and rather gusty day in Limerick. The thermometer stood at 51° , 55° , and 50° , at 9 A.M., 3 P.M., and 8 P.M. respectively. The barometer was steady at 29.604 at 9 A.M., and the same exactly at 2 P.M., but I have no observation of its condition at the moment of the whirlwind, nor at a later hour, nor is there any observation of the magnetic state either then or previously. The phenomenon took place about 5 h. 20 m. P.M., and did not occupy more than from five to ten minutes in its passage across the city. Taking two points on the Ordnance Map of the city of Limerick, one on the middle of Wellesley-bridge, the other at the Devil's Battery, near the Fever Hospital, if a straight line is drawn from the Clare side through these two points, such a line will cut most of the places visited by it in its greatest intensity. It was so strictly limited to this line, that at a distance of 150 feet on either side of it, its effects were hardly perceptible. The people in the higher parts of George's-street, and even at more moderate distances, had not heard of its occurrence until next morning. In the line I have mentioned, it was first felt about 100 yards or so to the west or north-west of the point first named; but I can hardly find any traces of it at the other side of the city beyond the point last spoken of.

Those who saw its approach, without being within its influence, say it looked like a dense column of smoke, as if from a house on fire. To such as were a little nearer, this appearance was accompanied by a loud, roaring noise, which they compared to that of a steamer discharging her steam after a voyage. The keeper of the toll-house on Wellesley-bridge, who had a good opportunity of witnessing it, says, "Some persons had come into the toll-house to take shelter from what they imagined an approaching shower, when suddenly a loud, roaring noise was heard a little to the north-west of it. On looking round, they saw the trees in that direction violently agitated, cracking and waving to and fro with great force; strong branches torn off and whirled about in the air. Presently it struck the river, close beside the toll-house, with a tremendous crash." I asked him what appearance the river presented? He said, *he could not see it at all*; it was covered from his view by a dense white vapour, like a fog, but through this he could see a number of row-boats that were lying at anchor near, lifted up and whirled about in the air with the utmost violence. When it had passed, these were found still lying at their anchors, but most of them upset, and all filled with water. As other indications of its violence, he mentioned that two women who were passing over the bridge in a donkey-cart were lifted out of the cart, blown across the bridge, and one of them would have been carried over the battlement had she not held fast by one of the turned stone pillars that supported it. Several other instances of its great power might be mentioned. On Arthur's-quay, the mainsail of a turf-boat, which lay over a rick of turf, black-tarred and heavy, being made of strong canvass, was lifted up, carried over the houses, and left upon the roof of a house in Denmark-street, about 150 yards off. The roof of a low shed, made of deal planks and rafters, in a timber-yard at the re-re of Denmark-street, was taken up into the air, broken into pieces, several of which

came down at various distances, some into another timber-yard about 200 yards off. I saw a great number of the planks and two of the rafters of the shed at this latter place; the rafters were 18 feet long, 9 inches wide, and 3 inches thick—one of them coming down endways, had entered the earth to a considerable depth, and was broken short off. The roofs of many of the houses, and stories in the track I have mentioned, were stripped of their slates to a greater or less, in some instances to a very considerable extent. In one place, two chimneys were pointed out to me, in a low situation, attached to a bakery; they were of great strength, being from 3 to 4 feet in the side, square built, and not more than 12 or 14 feet high. One of them was blown down completely, and the other partially. What has often before been remarked of storms was exemplified also in this, that its most violent effects were exhibited in situations that seemed very low, sheltered, and secure. A singular illustration of this remark was presented at the building called the Linen Hall, on the top of which is a little dome or cupola, surmounted by a slender and delicate model of a spinning-wheel; while many of the low places I have spoken of were visited with such tremendous effect, and while even the roof of this building itself was stripped of its slates in many places, both back and front, this little spinning-wheel, though high in the air, supported on a slender stem, and quite unsheltered, was wholly uninjured.

There are two points, however, which deserve a special notice, from the very peculiar action on them I have already alluded to. One was the office of Mr. Gleeson, the ship-agent, which is in a low angle, at the foot of a flight of stone steps, near the Swivel Bridge. Here there is a window about 12 or 14 feet wide, by 10 in height. This window was covered with shutters outside, and barred and bolted. The people were gone home; all the doors were shut, and there was no chimney nor fire-place in the room. When the storm had passed,

the window-frame was found torn from its place and the glass all shattered. But what was most singular, this was evidently effected *by a force acting from within*. The bolts, which could not be drawn, brought the window-frame with them six or eight inches *towards* the street, particularly at one end, and it was clearly by the distortion of the frame the glass was broken, as the shutters were not taken off at all—the injury was exactly what one would expect to see if a quantity of gunpowder had been exploded in the room, and had forced out the window as the weakest point. The same circumstances almost exactly took place, under similar conditions, with respect to a window at Mr. Hogg's, situated near the angle between Honan's-quay and Arthur's-quay, and looking out upon the latter. This window is not so large as the one before spoken of, and the effects were not so violent; they were sufficiently so, however, to break some of the panes, and the slighter parts of the window-sash, the fractures running in such directions as showed that the force came from within. Indeed, it could hardly be otherwise, as the shutters lay close on the outside, and gave them complete protection. This was further proved by the fact, that some windows in other parts of the same side of the house, unprotected by shutters, had several panes broken, yet not a trace of broken glass could be found anywhere, neither in the room, on the window-sill, nor in the area below, nor on the flags around it. Some towels also, and a sheet, carried out of one of these windows, could never be found afterwards. A singular instance of the force of the squall occurred at the rere of the house, where a large piece of cast iron, of several hundred-weight, lying against an open window, was blown down by the blast, and shook the whole house in its fall.

The circumstance I have spoken of, of the force in both these cases acting from within, might be explained if one could suppose a sudden and violent expansion of the air within the room, occasioned by a vacuum, produced by some cause out-

side. Such a vacuum would also account for the violent rush of the air through the window at the rere of the house. On the whole, this phenomenon seems to resemble, or present in many points the same conditions as produce a water-spout at sea; but I am unwilling to add to the length of this letter by forming conjectures as to its cause, or suppositions which would account for all I have described. This I leave to better judges, confining myself at present to as accurate a detail of the facts as I could collect or procure.

Believe me, dear Sir,

Very sincerely yours,

DANIEL GRIFFIN, M. D.

The Rev. Charles Graves, F.T.C.D.

Rev. Humphrey Lloyd and Robert Mallet, Esq., made some remarks on the probable causes of some of the phenomena noticed by Dr. Griffin.

The Rev. William Reeves, D.D., exhibited an ancient deed, written on goat-skin, being a grant of certain lands in Islay, from Mac Donnell of the Isles to Brian Vicar Magee. Although a Scottish record, it is strictly conformable to the rules of Irish orthography and construction, showing that the peculiarities which now characterize the Scotch dialect of the Gaelic did not exist in 1408, the date of this instrument. The following copy has been carefully made, and a literal translation appended.

On ainnm De Amen.

Ataampe mac Doínnail ag bponnağ 7 caðairc én mairg
 beğ go leit ðpearann uaim pðein 7 om oigrib do ðlipian ðicairpe
 mhağaoð 7 ba oigrib na ðiağ go pìopðuiğe ruçám, ap fon a
 ðeigðeipðipe ðam pðein ağar ðom açair pòmam; 7 po air
 çunnpağ 7 ap çoinçiolł go ccaðpauð pe pèin ağar iaðpan
 ðamra 7 ðom oigrib am ðiağ go blaðananiail ceitpe ba ion-